

ABSTRACT OF THE DISCLOSURE

The present invention provides a method and apparatus for forming a double-doped polysilicon floating gate in a semiconductor memory element. The method includes forming a first dielectric layer on a semiconductor substrate and forming a floating gate above the first dielectric layer, the floating gate comprised of a first layer doped with a first type of dopant material and a second layer doped with a second type of dopant material that is opposite the first type of dopant material in the first layer. The method further includes forming a second dielectric layer above the floating gate, forming a control gate above the second dielectric layer, and forming a source and a drain in the substrate.